

FILEID**LIBFFC

J 10

LL IIIIII BBBBBBBB FFFFFFFFF FFFFFFFFF CCCCCCCC
LL IIIIII BBBBBBBB FFFFFFFFF FFFFFFFFF CCCCCCCC
LL II BB FF FF CC
LL II BBBBBBBB FFFFFFFFF FFFFFFFFF CCCCCCCC
LL II BBBBBBBB FFFFFFFFF FFFFFFFFF CCCCCCCC
LL II BB FF FF CC
LL II BBBBBBBB FF FF CCCCCCCC
LL II BBBBBBBB FF FF CCCCCCCC
LL IIIIII BBBBBBBB FF FF CCCCCCCC

LL IIIIII SSSSSSSS SSSSSSSS
LL IIIIII SS SS
LL IIIIII SS SS
LL IIIIII SSSSSS SS
LL IIIIII SSSSSS SS
LL IIIIII SS SS
LL IIIIII SS SS
LL IIIIII SSSSSSSS SSSSSSSS
LL IIIIII SSSSSSSS

(2) 53 DECLARATIONS
(3) 85 LIB\$FCC - find first clear bit

0000 1 .TITLE LIB\$FFC - find first clear bit
0000 2 :IDENT /1-002/ ; File: LIBFFC.MAR
0000 3
0000 4
0000 5 *****
0000 6 *
0000 7 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
0000 8 * DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
0000 9 * ALL RIGHTS RESERVED.
0000 10
0000 11 * THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
0000 12 * ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
0000 13 * INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
0000 14 * COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
0000 15 * OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
0000 16 * TRANSFERRED.
0000 17
0000 18 * THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
0000 19 * AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
0000 20 * CORPORATION.
0000 21
0000 22 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 23 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24
0000 25
0000 26 *****
0000 27
0000 28
0000 29 **
0000 30 * FACILITY: General Utility Library
0000 31
0000 32 * ABSTRACT:
0000 33
0000 34 * A bit string is scanned for the first bit clear. If one is found before
0000 35 * the string is exhausted then a success status is returned. Otherwise a
0000 36 * failure status is returned.
0000 37
0000 38 * ENVIRONMENT: User Mode, AST Reentrant
0000 39
0000 40 --
0000 41 * AUTHOR: Donald G. Petersen, CREATION DATE: 03-Jan-78
0000 42
0000 43 * MODIFIED BY:
0000 44
0000 45 * DGP, 03-Jan-78 : VERSION 00
0000 46 * 01 - Original
0000 47 * 00-02 - DGP 06-Jan-78 - Change LIB\$NOTFOU to a literal
0000 48 * 00-03 - Return SSS_NORMAL instead of LIB\$ NORMAL. TNH 15-July-78
0000 49 * change BEQL to BNEQ
0000 50 * 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 51 ; 1-002 - Add "_" to PSELECT directive. JBS 21-DEC-78

```
0000 53 .SBTTL DECLARATIONS
0000 54 ; INCLUDE FILES:
0000 55 ; 56 ; EXTERNAL DECLARATIONS:
0000 57 ; 58 ; 59 ; 60 ; 61 .DSABL GBL ; Disable automatic generation of
0000 62 ; ; 63 :EXTRN SSS NORMAL ; .EXTRN
0000 64 :EXTRN LIB$_NOTFOU ; Normal successful completion
0000 65 ; ; SEVERE error condition
0000 66 ; ; Value not found
0000 67 ; ; MACROS:
0000 68 ; ; 69 ; ; 70 ; ; 71 ; ; EQUATED SYMBOLS:
0000 72 ; ; 73 ; ; 74 ; ; 75 ; ; OWN STORAGE:
0000 76 ; ; 77 ; ; 78 ; ; 79 ; ; PSECT DECLARATIONS:
0000 80 ; ; 81 ; ; 82 .PSECT _LIB$CODE PIC, SHR, LONG, EXE, NOWRT
0000 83
```

0000 85 .SBTTL LIB\$FCC - find first clear bit
 0000 86 ++
 0000 87 FUNCTIONAL DESCRIPTION:
 0000 88
 0000 89 The field specified by the start position, size, and base is searched
 0000 90 for the first clear bit. If one is found, a success status is returned as
 0000 91 well as the bit position (relative to the base) in the find position.
 0000 92 If a clear bit is not found, a failure status is returned. If a size of zero
 0000 93 is specified then a failure status is returned.
 0000 94
 0000 95 CALLING SEQUENCE:
 0000 96
 0000 97 status.wlc.v = LIB\$FFC (startpos.rl.r, size.rbu.r, base.rl.r, findpos.wl.r)
 0000 98
 00000004 0000 99 STARTPOS = 4 : Adr of start position
 00000008 0000 100 SIZE = 8 : Adr of size
 0000000C 0000 101 BASE = 12 : Adr of base
 00000010 0000 102 FINDPOS = 16 : Adr of field for clear bit position
 0000 103
 0000 104 INPUT PARAMETERS:
 0000 105
 0000 106 NONE
 0000 107
 0000 108 IMPLICIT INPUTS:
 0000 109
 0000 110 NONE
 0000 111
 0000 112 OUTPUT PARAMETERS:
 0000 113
 0000 114 NONE
 0000 115
 0000 116 IMPLICIT OUTPUTS:
 0000 117
 0000 118 NONE
 0000 119
 0000 120 FUNCTION VALUE:
 0000 121
 0000 122 SSS_NORMAL - if a clear bit is found
 0000 123 LIBS_NOTFOU - if a clear bit is not found
 0000 124
 0000 125 SIDE EFFECTS:
 0000 126
 0000 127 SSS_ROPRAND - reserved operand fault for:
 0000 128 1.) size greater than 32 is specified
 0000 129 2.) start position greater than 31 and field is in registers
 0000 130
 0000 131
 0000 132 .--
 0000 133 .ENTRY LIB\$FFC, ^M< > ; Entry point
 0000 134
 10 BC 0C BC 08 BC 04 BC EB 0002 135 FFC ASTARTPOS(AP), ASIZE(AP), - ; find first clear bit
 000B 136 ABASE(AP), AFINDPOS(AP)
 50 00000000'8F 08 12 000B 137 BNEQ 10\$; branch if bit found
 00 000D 138 MOVL #LIBS_NOTFOU, R0 ; return failure status
 04 0014 139 RET
 50 00000000'8F D0 0015 140 10\$: MOVL #SSS_NORMAL, R0 ; return success status
 04 001C 141 RET

LIB\$FFC
1-002

- find first clear bit
LIB\$FCC - find first clear bit

B 11

001D 142

.END

16-SEP-1984 00:08:34 VAX/VMS Macro V04-00
6-SEP-1984 11:06:52 [LIBRTL.SRC]LIBFFC.MAR;1

Page 4
(3)

LIB
V03

```
BASE      = 0000000C
FINDPOS   = 00000010
LIB$FFC   = 00000000 RG 01
LIB$_NOTFOU  **** X 00
SIZE      = 00000008
SS$ NORMAL  **** X 00
STARTPOS  = 00000004
```

```
+-----+
! Psect synopsis !
+-----+
```

PSECT name

PSECT name	Allocation	PSECT No.	Attributes
. ABS	00000000	(0.) 00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
_LIB\$CODE	0000001D	(29.) 01 (1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

```
+-----+
! Performance indicators !
+-----+
```

Phase

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.02	00:00:01.98
Command processing	111	00:00:00.30	00:00:03.04
Pass 1	68	00:00:00.22	00:00:02.24
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	41	00:00:00.21	00:00:02.00
Symbol table output	2	00:00:00.01	00:00:00.01
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	255	00:00:00.79	00:00:09.30

The working set limit was 900 pages.

1409 bytes (3 pages) of virtual memory were used to buffer the intermediate code.

There were 10 pages of symbol table space allocated to hold 7 non-local and 1 local symbols.

142 source lines were read in Pass 1, producing 11 object records in Pass 2.

0 pages of virtual memory were used to define 0 macros.

```
+-----+
! Macro library statistics !
+-----+
```

Macro library name

_S255\$DUA28:[SYSLIB]STARLET.MLB;2

Macros defined

0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:LIBFFC/OBJ=OBJ\$:LIBFFC MSRC\$:LIBFFC/UPDATE=(ENH\$:LIBFFC)

0206 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY

